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DIALOG(R) File 347:JAPIO  
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05139469 \*\*Image available\*\*  
OPTICAL CIRCULATOR AND CONTROL METHOD FOR LIGHT

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JAPIO KEYWORD:R012 (OPTICAL FIBERS)

#### ABSTRACT

PURPOSE: To provide an optical circulator capable of suppressing polarization dispersion and enhancing isolation.

CONSTITUTION: This circulator includes first to eighth double refractive materials 21-1 to 21-8, Faraday rotors 19-1 to 19-3, a half-wave plate 20 and polarization assurance plates H1, H2. The light rays inputted from fibers F1 to F4 are coupled to desired fibers by having high isolation. In addition, the polarization dispersion of the signal light to the input of the light from the any fibers F1 to F4 is suppressed.

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Optical circulator control method for optical communication using optical  
fibre - involves locating second polarized light compensator board  
between second polarized beam splitter and birefringent material

Patent Assignee: SUMITOMO ELECTRIC IND CO (SUME )

Number of Countries: 001 Number of Patents: 001

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Abstract (Basic): JP 8094969 A

The method employs three faraday rotation elements (19-1-19-3) and light double refracting flat board (21-1-21-8). A half wavelength plate (20) is located between the third faraday rotation element (19-3) and the third and fourth double refracting flat board. The light input from the fibre (F1-F4) is coupled with a target fibre through the above referred structure. A second polarized light compensator board is located between second polarized beam splitter and birefringent material.

ADVANTAGE - Controls wavelength dependence of input optical radiation. Increases transmission signal bit rate and optical coupling efficiency.

Dwg.4/23

Title Terms: OPTICAL; CIRCULATE; CONTROL; METHOD; OPTICAL; COMMUNICATE;  
OPTICAL; FIBRE; LOCATE; SECOND; LIGHT; COMPENSATE; BOARD; SECOND; BEAM;  
SPLIT; BIREFRINGENT; MATERIAL

Index Terms/Additional Words: DUPLEX; COMMUNICATION; DATA; LINK

Derwent Class: P81; W02

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